

Teletrauma: Preliminary Design & Findings From Vermont's Rural Telemedicine Network

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Rural Trauma Problems

- Discovery - Late
- Rudimentary
Prehospital Capabilities
- Prolonged Transport
Times

**Could Telemedicine be
used in Vermont's
“hostile” rural
environment?**



A Trauma Solution?

Use TMED to bring the eyes and ears of an experienced trauma surgeon into the community hospital to help with the initial stabilization of a trauma patient.

U.S. Department of Commerce

- Technologies Opportunities Programs (TOP)
- \$300,000 in matching funds
- <http://www.ntia.doc.gov/oiahome/top/index.html>

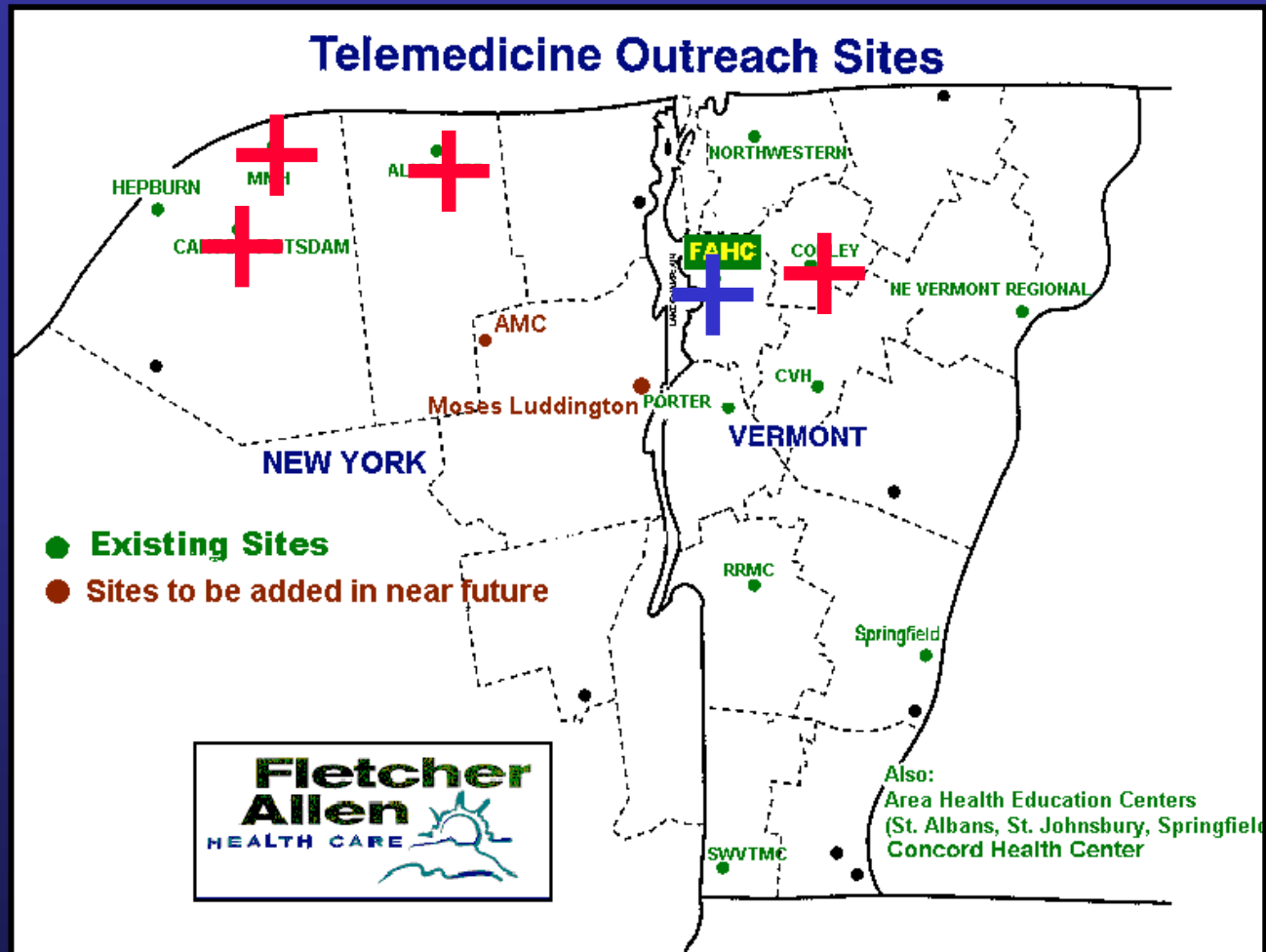


Telemedicine System

- Desktop System
- ISDN, 384 kbps
- *Intel* microprocessor
- 17" *Sony* Monitor
- Zydacron Z250 video conferencing board
- Zydacron Z206 multiple BRI comm board



Implementation



4 Trauma Sites & 3 Surgeon's homes

Trauma TMED Protocol

Any one of the following:

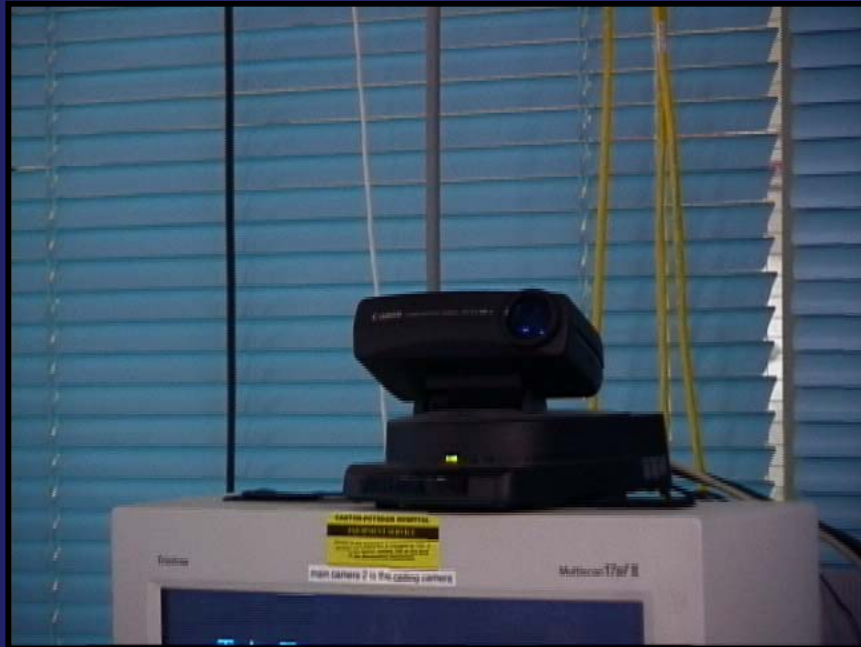
- ☒ 1. GCS \leq 13
- ☒ 2. Hypotension
(systolic BP < 90 mmHg)
- ☒ 3. Penetrating truncal trauma
- ☒ 4. Respiratory Distress
(10 > RR < 30)

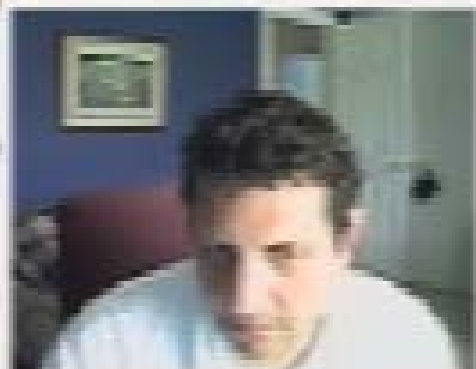
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Trauma TMED Protocol

- ☒ 5. Amputation proximal to the wrist or ankle.
- ☒ 6. Any patient not meeting the above criteria for whom the treating physician feels it is appropriate to call a telemedicine consult.

Electronic Eyes & Ears







Results

- 26 tele-trauma consults
(4/2000 - 1/2001)
- Ages 14 - 81 years old
- 96% blunt mechanism
- 50% MVC, 12% ATV,
12% pedestrian struck

2 Cases of Potentially Lifesaving Tele-trauma Consults

Case #1 41 year-old with
severe CHI unable to
intubate

Emergent cricothyroidotomy

Continued →

2 Cases of Potentially Lifesaving Tele-trauma Consults

Case #2 24 year-old severe
multi-trauma hypotensive,
severe CHI

DPL -> to OR for control of
intracavitary hemorrhage

Technical Problems

- 4 times unable to connect
- Remote control failure
- Audio failure

Conclusion

- Tele-trauma enhances rural trauma care
 - Rapid response
 - 2 lives potentially saved.
 - well received by rural trauma providers.
- Occasional technical difficulties

Questions?

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